

references are respectfully referred to as Dufour, Kawamura, Hashimoto and Migdal, respectively, hereinafter.

PATENTABILITY OF CLAIMED INVENTION

Claim 1 recites:

receiving from a camera a sequence of images taken sequentially and respectively around the object;
generating a 3D region from a sequence of mask images, each of said mask images derived from one of said sequence of images by projecting the object onto a specific plane;
generating a mesh model from said 3D region using a tree structure; and
producing said fully-textured 3D model from said mesh model with respect to said sequence of images.

(emphasis added)

To reject Claim 1, the Examiner applies Dufour in conjunction with Kawamura to reject certain features, particularly, "generating a 3D region from a sequence of mask images, each of said mask images derived from one of said sequence of images by projecting the object onto a specific plane". The Applicants contest the combination of Dufour with Kawamura as it is believed that there is no motivation to combine these references in the manner proposed by the Examiner. Nevertheless, even if these two references were to be combined, the combination would still fail to teach or suggest the features.

As described in lines 1-5 of Col. 2 in Dufour, a disparity map is derived from a multi-view matching independently on each view, where each view corresponds to one of the original images. There is no any teaching about the use of mask images as recited in Claim 1. Figure 5 and lines 14-17 of page 16 of the pending application define that mask images are binary (silhouette) images. Although Dufour mentions that binary data is used, in B step of Col. 2, Dufour fails to teach or suggests the use of such mask images, Instead, showing that a tree-structured representation is used to describe binary valued volumetric data enclosed by a bounding cube.

The Examiner also admits that Dufour does not disclose generating mask images and thus applies the mask image concept in Kawamura to Dufour. Given the definition and use of the mask images (see, for example, 606 of FIG. 6A and 608 of FIG. 6B) of the pending application, Dufour would fail to derive the disparity map because no depth information could be relied upon in the mask images and it is well known that all a mask image has is a silhouette. Further, the mask image defined or generated in Kawamura (see lines 20-35 of Col thereof) is substantially different from the mask image recited in Claim 1. Hence, the Applicants submit that the combination of Dufour, Kawamura and Hashimoto or Migdal has failed to teach or suggest the combined features recited in Claim 1 and respectfully request the Examiner to withdraw the rejections to Claims 1-3, 5-9 and 11-14.

Claim 18 is rejected with the same reasons. The Applicants wish to apply the above reasons to support Claim 18 and respectfully request the Examiner to withdraw the rejections to Claims 18-20, 22-26 and 28-31.

Claim 35 include the combined features recited in Claim 1 or 18. Accordingly, the Applicants wish to apply the above reasons to support Claim 35 and respectfully request the Examiner to withdraw the rejections to Claims 35-36.

SUMMARY

The Applicants appreciate a telephonic interview among the undersigned, the Examiner, and the Examiner's supervisor Mr. Mark Zimmerman on December 17, 2002. The undersigned had the opportunity to discuss the Applicants' view on the cited references and the deficiencies if combined in view of the pending claims. The above remarks are believed to have responded to possible concerns the Examiner may have.

As the reasons stated above, the combined features in Claim 1 are evidently not taught nor suggested in Dufour, Kawamura, Hashimoto and/or Migdal, viewed alone or in combination. The Applicant believes that Claims 1-14, 18 - 31 and 35-38 shall be in condition for allowance. Therefore, it is believed that the entire application

is now in condition for allowance, early and favorable action is being respectfully solicited.

If there are any issues remaining which the Examiner believes could be resolved through either a Supplementary Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at (408)777-8873.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to "Commissioner of Patents and Trademarks, Washington, DC 20231", on December 17, 2002. (Faxed to (703)872-9314)

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Respectfully submitted;


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